USGS
science for a changing world

Earthquake
Shaking

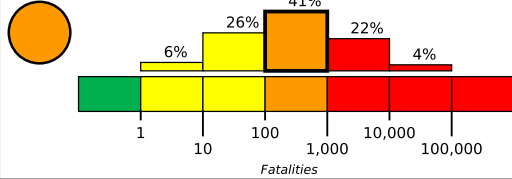Orange
Alert

GSN · USAID FROM THE AMERICAN PEOPLE · ANSS

M 6.3, 33 km NNE of Zindah Jn, Afghanistan

Origin Time: 2023-10-07 06:41:03 UTC (Sat 11:11:03 local)
Location: 34.6102° N 61.9242° E Depth: 14.0 km

PAGER
Version 4

Created: 1 day, 0 hours after earthquake

Estimated Fatalities

6% 26% 41% 22% 4%

1 10 100 1,000 10,000 100,000
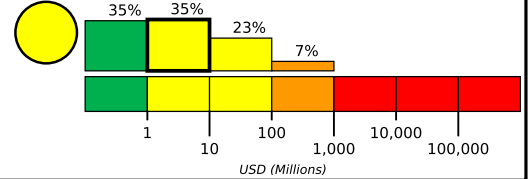*Fatalities*

Orange alert for shaking-related fatalities. Significant casualties are likely and the disaster is potentially widespread. Past events with this alert level have required a regional or national level response.

Yellow alert for economic losses. Some damage is possible. Estimated economic losses are less than 1% of GDP of Afghanistan.
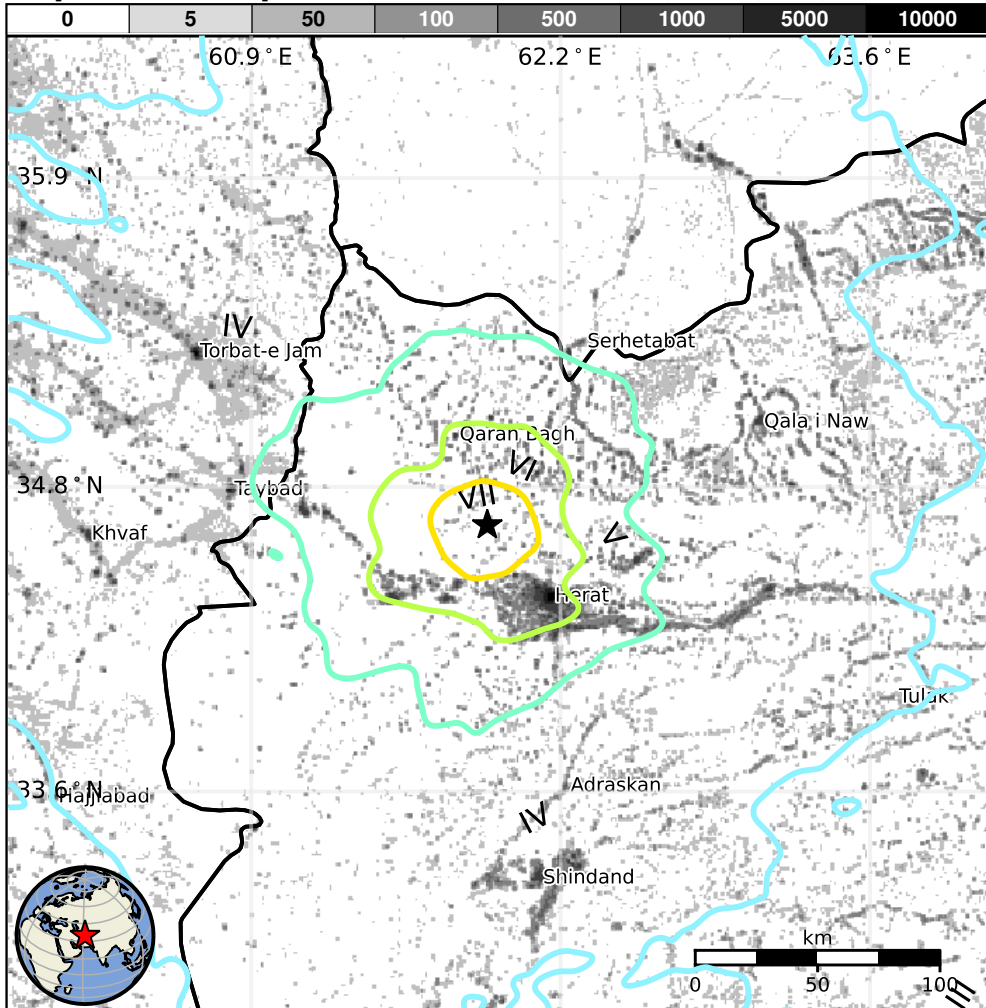
Estimated Economic Losses

35% 35% 23% 7%

1 10 100 1,000 10,000 100,000
USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	304k*	2,459k	703k	1,172k	44k	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

| 0 | 5 | 50 | 100 | 500 | 1000 | 5000 | 10000 |

Structures

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though resistant structures exist. The predominant vulnerable building types are adobe block and unreinforced brick with mud and timber post construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1979-11-14	214	6.5	VI(4k)	280
1997-05-10	213	7.2	VIII(16k)	2k
1968-08-31	279	7.2	IX(3k)	15k

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
VI	Zindah Jan	10k
VI	Rabat-e Sangi-ye Pa'in	<1k
VI	**Herat**	**273k**
VI	Injil	<1k
VI	**Qarah Bagh**	**12k**
VI	Ghoriyan	<1k
IV	**Taybad**	**38k**
IV	**Shindand**	**29k**
IV	**Qala i Naw**	**9k**
IV	**Torbat-e Jam**	**59k**
IV	Ghormach	30k

bold cities appear on map.   (k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
https://earthquake.usgs.gov/earthquakes/eventpage/us6000ldpg#pager

Event ID: us6000ldpg